Research Synthesis Concerning Stress and Coping of Thai People

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Abstract

The objectives of this research synthesis were to summarize the progress and development of research studies concerning stress and coping of Thai people, and to search for factors affecting stress and coping by synthesizing from research, dissertation, and minor thesis. The sample consisted of 490 research studies of 15 higher education institutions on the subject of stress and coping during 1982-2007. Qualitative data was synthesized by content analysis presented in percentages. Quantitative data was synthesized by estimating effect sizes through Meta analysis techniques of Glass, et al. Research synthesis results showed that the majority of research had objectives to find correlation and predictors – at 80%. The reliability coefficient ranges of stress questionnaires and coping questionnaires were 0.7000-0.9800 and 0.6033-0.9500 respectively. Levels of stress and appropriate coping were at moderate, at 55.41% and 49.50% respectively. The majority of samples studied were government officials: nurses, teachers, lecturers, and policemen. Furthermore, factors that affected stress and coping consisted of 4 groups. Factors with influence on stress were: 1) Bio-social and personal factors, at the average effect size of 0.1609-0.0559, of which the highest predictor was physical disability; 2) Psychological factors, at the average effect size of 0.2637-1.6450, of which the highest predictor was anxiety; 3) Social factors, at the average effect size of 0.2118-0.9725, of which the highest predictor was education reform; 4) Intervention program, of which the highest effect on stress was self-control practice. Factors with influence on coping were: 1) Bio-social and personal factors, at the average effect size of 0.1214-0.3551, of which the highest predictor was residence location; 2) Psychological factors, at the average effect size of 0.1201-1.0208, of which the highest predictor was expectation; 3) Social factors, at the average effect size of 0.1635-0.7144, of which the highest predictor was workplace support; 4) Intervention program, of which the highest effect on coping was cartoon-pictured information program.

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Background and Justification

According to the 10th National Economic and Social Development Plan (2007-2011), the essential goals are creation of social capital, upgrading quality of life, fostering the people's wellness through concepts of adequacy, prudence, strengthening the people by establishing immunity; under the King's Sufficiency Economy principle (Wattanasiritham, 2006). That is, everyone in the Thai society possesses good mental health, recognizes true happiness or well-being; which can be measured by components in three aspects: 1) Self-esteem: confidence and belief in oneself, 2) Satisfaction of life: optimistic, humorous and contended, 3) Peace of mind: in pleasant activities, relaxed, and tranquility. (Department of Mental Health, 1999) But in present days, lifestyles of Thai people must face competition, pressure from capitalism-induced changes. Thai people are hence overwhelmed under materialism, which requires merely transitory, externally-induced happiness. Combined with the trend of weakening family units –due to more shattered, or single parent families with family members living independently, lacking dependence and attachment, more and more detached family-relationship because of parents' strenuous outside works—more pressure, expectation, and fragility are created upon the children. When threatening problems or events arise, it becomes difficult to deal with by themselves, causing tensions and unless that stress can be resolved, it may lead to resolution of problem by violent means –inflicting harms to oneself or to others. From survey results, mental health problems of Thai people have increased, especially in Bangkok, which increased by 9 times, from 587 mental patients per 100,000 population in 2003 to 5,489 mental patients per 100,000 population in 2005; the average nationwide figure being 3,392 mental patients per 100,000 population in 2005 (Sinthuvanich, 2006). Study results by Department of Mental Health in 2003 reported that top coping methods of Thai people were acceptance of what happened, working on hobbies, and venting off to others –at 91%, 89%, and 74% respectively; besides religious merit-making deeds and doing exercises. With regard to persons to ask for help when in stress, the top response was help oneself at 78%, followed by family members, lovers, and psychologists/fortune-tellers – at 64%, 46%, and 3% respectively (Limsuwan, 2006).

It can be seen that the problems on stress and coping with stress are still continually found in Thai people and society, and with increasing trend. The study by Intarakamhang, Ungsinan (2550, 49-71), which examined causal relationship and life crisis index of married middle-age Thai women who worked out-of-home, found that stress was the primary critical element of life crisis; if a person sensing stress is unable to deal with stress and adjust, a life crisis exists that needs to be cured. Research results showed that factors influencing crisis were: neuroticism personality, life-experience of losses, family obligations, relationship with spouse, religious association in family, family support, work responsibility, career advancement, work ambiguity, support from work associates and superiors, community of residence's environment, and relationship with neighbors. On this, if a person experiencing stress is unable to deal with appropriately and adjust, the consequence was loss of self-esteem, loss of effectiveness at work, use of violence on self / family members. From many research studies on stress, it is found that there are a number of research works, but they are inconclusive as to whether the stress of Thai people can be reduced or eliminated; on the contrary, the trend is that stress of Thai people is increasing. For this reason, the researcher recognizes the importance of a study to fulfill the void of studies that have yet to find solutions concerning stress of Thai people, or to find any programs to help reduce stress of Thai people. Synthesis of research concerning stress and coping of Thai people is an approach that helps to deliver updated finding contents of research problem that will be

useful to understand more clearly the scope of accumulation and growth of body of knowledge in that discipline. (Bankaw, et al., 2005: 121).

Objective

1. Summarize the progress and development of research studies concerning stress and coping of stress.
2. Search for factors and effect size affecting stress and coping of stress.
3. Summarize stress-reduction programs which influence on stress and coping of stress.

Scope of Research

A synthesis from research studies concerning stress and coping of Thai people, comprising research, dissertation and minor thesis from 1982 to 2007; in total, 490 research studies from 15 higher education institutions.

Definitions of Terms

Research synthesis refers to the classification of details of information or contents from each of the research under studied into groups; and reassemble those details together to achieve new, more definite conclusions. For this, the researcher performed research synthesis by employing content analysis and Meta analysis techniques of Glass, et al.

Stress refers to the feeling when a person senses discomfort, repression, frustration, is unable to decide on or judge the existing situation, and consequently exhibits physical or emotional imbalances.

Coping refers to the ability of a person in dealing with problem by focusing on the problem to effect change in the actual situation or by readjusting the process; and by focusing on correcting troubled emotions by means of thoughts and mental mechanism; display of emotional control, peace of mind, together with oral and physical emotional discharges.

Conceptual Framework

This research synthesis employed Meta analysis according to the conceptual principle of Glass, McGraw, & Smith, 1981 in adjusting statistics, by calculating from arithmetic formulas into effect size. The researcher has studied theories and research studies concerning stress and coping to establish variables which affect stress and coping, as illustrated in the conceptual framework below:-
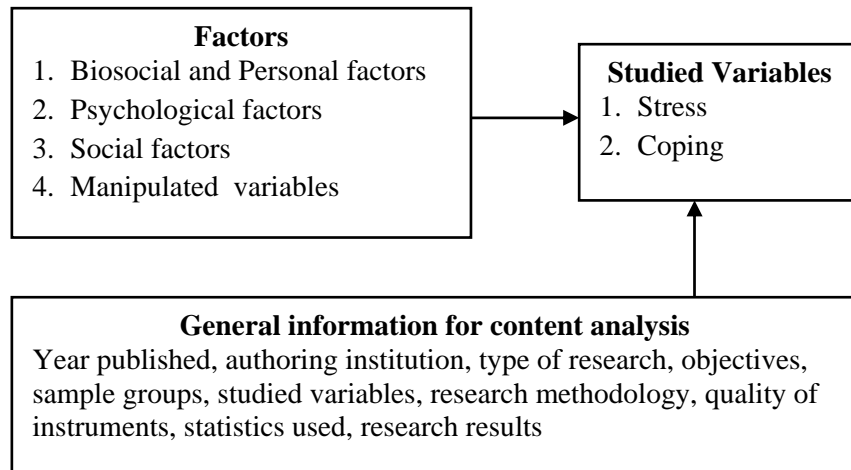
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┌─────────────────────────────────┐        ┌──────────────────────┐
│           Factors               │        │  Studied Variables   │
│  1. Biosocial and Personal      │───────▶│  1. Stress           │
│     factors                     │        │  2. Coping           │
│  2. Psychological factors       │        │                      │
│  3. Social factors              │        │                      │
│  4. Manipulated  variables      │        │                      │
└─────────────────────────────────┘        └──────────────────────┘
┌──────────────────────────────────────────────────┐
│    General information for content analysis        │
│  Year published, authoring institution, type of    │
│  research, objectives, sample groups, studied      │
│  variables, research methodology, quality of       │
│  instruments, statistics used, research results    │
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Figure 1 The Conceptual Framework

1. Qualitative research synthesis by content analysis

1.1 Read and select research studies with report of quantitative results and complete statistics.

1.2 Find frequencies of general information as indicated in research data record forms and summarize as percentages.

1.3 Summarize results of content analysis, discuss results and present recommendations.

2. Quantitative research synthesis by Meta analysis concept of Glass, et al.

1.1 Select research with keywords of "stress", and "coping" including research studies that examine dependent variables of meanings compatible with stress and coping.

1.2 Determine standard index for Meta synthesis; in this case, effect size (d) is used.

1.3 Consider definitions of each research studies whose meanings of stress and coping are equivalent in scope; to be studied.

1.4 Categorize independent variables related to stress and coping.

1.5 Construct Research Result Data Record Form, verified by experts.

1.6 Test use of Data Record Form and test entry of data codes, to be synthesized as well as for improving research instruments.

1.7 Collect and ensure complete records of data for analysis.

Studied Variables comprise:-

Dependent variables: stress, coping

Independent variables: variables categorized into 4 groups:

1) Bio-social and Personal factors: e.g. age, work age, status, income, branch of study, family characteristics, birth order, spare time usage, etc.

2) Psychological factors: e.g. personality, experience of losses, anxiety, learning habits, self-concept, motivation, etc.

3) Social factors: e.g. family obligations/responsibilities, relationship, social support, education reform, etc.

4) Intervention programs to reduce stress and for coping: e.g. massage program, counselling, meditation, etc.

Research Instruments are Research Record Forms which the researcher constructed from the research synthesis Meta analysis concepts and techniques of Glass, et al, and devised from the Record Forms of Wiratchai, Nonglak and Wongvanich, Suwimol (2001), Sucaromana, Ashara and Intarakamhang, Ungsinan (2005), and Thepthien Bang-on (2005). The quality development procedures were: 1) Study research synthesis through Meta-analysis to understand direction for construction of data-collection tools, including determining matters pertaining to research objectives to be collected. 2) Construct Data Record Form to embrace matters researchers aimed to synthesize, and verified by three experts. 3) The researchers applied Data Record Form for testing by collecting data from 50 research studies of different sources, research designs, and statistics used; and when problems in data collection were discovered, or when some issues were needed to be added, the research instruments were revised before actual application.

Data Analysis

Analysis of data was performed in accordance with Glass, McGraw, & Smith (1981), who suggested formula to estimate the effect sizes and correlation coefficients from each research, in 2 ways: i.e. estimation by calculating directly from statistics obtained from samples, and estimation by calculating from statistics obtained through test of significance. This study employed statistical estimation obtained through test of significance: r, t, z, x^2. Analysis of data in this research consisted of:-

1. Content analysis: by descriptions and arithmetic report in numbers and percentages.
2. Quantitative data synthesis: using Meta analysis, by estimating standard index as the effect size.

Summary of Research Synthesis

Part 1: Results of qualitative research synthesis, according to objective no. 1

1.1 General information of research studies

1) Levels of research: The majority were research type of masters' degree thesis –at 88.78%, followed by minor thesis, doctoral degree dissertations, and professor research reports. 2) Years published: the 1997-2007 period was when most research studies –and interest on the subject, on stress and coping of Thai people were published; totaling 384 from 490 research papers synthesized, or 78.37%. 3) Higher education institutions that were the source of research papers: the majority were from Chiangmai University, at 20.61%. Followed by Srinakarinwirot University, Burapha University, Mahidol University, Khonkaen University, Kasetsart University, Thammasart University, Ramkhamhaeng University, and others.

1.2 Information concerning research

1) Objectives of research papers synthesized: The majority was to study comparative relationship and to find causal prediction of stress and coping –at 80.00%, second was studies on program effectiveness. 2) Research design: The majority of research were designed as correlational studies –at 65.71%, followed by experimental studies. 3) Stress and coping studied variables: The majority of research focused on only critical

variables of stress –at 59.39%, 21.68% was studies on coping, and 18.98% was studies on both stress and coping in the single research papers. 4) Reliability Coefficient of stress questionnaires: as developed from the Department of Mental Health's Stress questionnaire, Alluster's HOS questionnaire, CMI (Cornell Medical Index) questionnaire, Suanprung Hospital's Stress questionnaire, Lazarus & Folkman's Stress questionnaire, Jacobson's Stress questionnaire, Wallance's State trait anxiety inventory , etc. There were only 264 research papers that reported on Cronbach's Alpha Coefficient. And it was found that the Reliability Coefficient of all questionnaires in research studies were in high-level range, at 0.7000 to 0.9800. 5) Reliability Coefficient of coping questionnaires: as developed from Stress-Coping questionnaire of Lazarrus & Foreman, Jalowiec, and McKibbin, etc. Only 145 research papers reported the Reliability Coefficient of questionnaires, in the range of 0.6033-0.9500. 6) Appropriate levels of stress and coping: mostly were at moderate levels, at 55.41% and 49.50% respectively. 7) Sampling methods: the majority of research studies employed Stratified random sampling, at 28.34%. Followed by Purposive sampling, Simple random sampling, Population sampling, and Multistage random sampling; at 25.67%, 18.98%, 6.68%, and 6.42% respectively. 8) Statistics used for data analysis: many research studies used more than 1 type of statistics for data analysis, depending on data characteristics. Most used correlation statistic (r), at 28.83%, next were t-test, ANOVA Regression, Chi-square and SEM (Structural Equation Modeling) statistics. 9) Samples of study: in 490 research studies, total sample groups comprised 95,645 persons. The majority were government officials, at 45,165 persons or 47.22%. Next were students, private-enterprise's employees, general public, and state-enterprise's employees, at 26.30%, 15.94%, 7.45%, and 3.09% respectively. In the group of **students**, most were in Bachelor's degree level, at 46.95%; next were students in secondary, primary, vocational, graduate levels, and kindergarten, respectively. In the group of **government officials**, most were studies on nurses, at 33.52%; next were teachers/lecturers, policemen, operational officials, administrators, academics, doctors and soldiers, prison-officials, social-welfare workers, accountants, postal officials, judges, education officers, social-security officials, librarians, correctional reformatory-officials, psychologists, respectively. In the group of **state-enterprises**, most were studies on bank employees, at 34.97%; next were officials of The Communication Authority of Thailand, officials of The Electricity Generating Authority of Thailand, drivers, air-traffic controllers, officials of The Airport Authority of Thailand, and computer operators, respectively. In the group of **private-enterprises**, most were studies on company employees, at 32.52%; next were private-hospital nurses, operational-level employees, managers, insurance salespersons, doctors, bank employees, private schools' teachers, computer operators, mass-medias, flight attendants, drivers, guides, and celebrities, respectively. In the group of **general public**, most were studies on patients, at 41.00%; next were seniors, patient-care, prisoners, drug-addicts, unemployed, sportspersons, pre-school children, and infants.

Part 2: Results of quantitative synthesis, by Meta analysis, per objective no. 2 and 3

2.1 Effect sizes of factors affecting stress of Thai people

2.1.1 Bio-social and personal factors: which had influence on stress consisted of 19 variables; with the average effect sizes of 0.1609 to 1.0559. The factor with highest influence was physical deficiency and handicap; followed by personal factors, parents' age, branch of study, birth order, and income, with effect sizes of 0.8249, 0.6827, 0.4325, 0.3785 and 0.3425, respectively. The factor with lowest influence was academic accomplishment.

2.1.2 Psychological factors: which had influence on stress consisted of 25 variables; with the average effect sizes of 0.2637 to 1.6450. The factor with highest influence was anxiety; followed by mental health, self-concept, self-esteem, and morals / ethics, with effect sizes of 1.0819, 0.9758, 0.8396 and 0.8376, respectively. The factor with lowest influence was learning habit.

2.1.3 Social factors: which had influence on stress consisted of 24 variables; with the average effect sizes of 0.2118 to 0.9725. The factor with highest influence was education reform; followed by parents' expectations, academic quality, work responsibilities / obligations, community of residence's environment, and participation, with effect sizes of 0.8501, 0.8480, 0.7614, 0.6772 and 0.6729, respectively. The factor with lowest influence was work-hours per day.

2.1.4 Intervention programs to reduce stress: which had influence on stress consisted of 19 programs; with the average effect sizes of 0.0020 to 1.4784. The program with highest influence was self-control practice; followed by self-help / self-reliance programs, groups, counselling, small-group teachings, and muscle-relaxation practices, with effect sizes of 1.3898, 1.3112, 0.9991, 0.9820 and 0.9757, respectively. The program with high influence was participation programs.

2.2 Effect sizes of factors affecting coping

2.2.1 Bio-social and personal factors: which had influence on stress-coping consisted of 13 variables; with the average effect sizes of 0.1214 to 0.3551. The factor with highest influence was residence location; and the factor with lowest influence was job position.

2.2.2 Psychological factors: which had influence on stress-coping consisted of 17 variables; with the average effect sizes of 0.1201 to 0.1208. The factor with highest influence was expectations; followed by emotional intelligence, tolerance, self-acceptance, and contentment, with effect sizes of 0.8245, 0.7787, 0.7412, and 0.7055, respectively. The factor with lowest influence was experience of losses.

2.2.3 Social factors: which had influence on stress-coping consisted of 14 variables; with the average effect sizes of 0.1635 to 0.7144. The factor with highest influence was workplace support; followed by work involvement, family relationship, coworkers' support, and family support, with effect sizes of 0.6856, 0.6834, 0.6761, and 0.5913, respectively. The factor with lowest influence was work-hours per day.

2.2.4 Intervention programs on coping with stress: which had influence on stress-coping consisted of 9 programs. The program with highest influence was cartoon-pictured information program; followed by life-skills development programs, Thai-massage, group-counselling, group reality therapy, and play activities, with effect sizes of 2.2390, 1.9595, 1.7500, 1.4480 and 0.9376, respectively. The program with the lowest influence was using belief in Karma.

Discussion

From the 1st Research Objective –to summarize the progress and development of research studies concerning stress and coping of Thai people, it was found that the majority of research synthesized was dissertations, studied during the last 10 years period, mostly from Chiangmai University, and secondly from Srinakarinwirot University. Regarding research conduct, the majority of research studies were correlational studies, using questionnaires already developed, e.g. Stress questionnaire of the Department of Mental Health, Lazarus & Folkman (1984), Jalowiec (1988). The questionnaires had been tested for reliability, with high and satisfactory Alpha coefficient: stress questionnaires with alpha coefficient range of 0.700 - 0.9800, and stress-coping questionnaires with alpha coefficient range of 0.6033 - 0.9500. Most used Stratified random sampling, correlation statistics, and sample groups were government officials and students.

As can be seen, general information of the research synthesis were similar in characteristics. That is, research papers synthesized were, in general, mostly in the group of Master's degree students. This means that full-time researchers or academics of the various establishments produce considerably very few research papers; it is quite regrettable when their research papers deserve more support, especially socio-psychology research. Perhaps because the country's social situations of the past 10 years change rapidly –putting more pressure on people, and stress on the society, people are more interested to study the subject. Such as the research by Sucaromana, Ashara and Intarakamhang, Ungsinan (2005) that compiled and synthesized 177 research studies concerning EQ in Thailand from 1997-2004 by Meta-analysis method of Hedges & Olkin (1985), which was a Vote-counting method yielding estimator of effect size. The result showed that most research were: masters' degree level –81.86%, studied during 2001-2003 period –81.87%, sample groups were students from kindergarten to Bachelor's degree –67.52%; research design were correlation, experimental, and construction of research instruments, respectively. Factors that affected EQ were: firstly, personal factors –with effect size of 0.05 – 0.65, followed by school / work / media environment factors –with effect sizes of 0.20 – 0.35, family factors –with effect size of 0.20 – 0.30, and biosocial factors –with effect size of 0.01 – 0.35, respectively. Likewise, the research synthesis by Thongkorn, Ariya (2002) that studied health-promoting behaviors through research synthesis using Meta-analysis method of Glass, et al. The findings showed that: almost all research studies were masters' degree level –92.42%, mostly studied during 1998-2001 period –41.66%, majority of sample groups were working-agers, most used health-promoting concept of Pender's health promotion model –totaling 72.72%; research instruments were mostly questionnaires, most with medium levels of reliability testing (α=0.40 – 0.80) –totaling 62.87%, and secondly, with high levels of reliability testing (α=0.80 – 0.98) –totaling 30.30%. Sampling methods were: mostly purposive sampling – 26.51%, followed by accidental sampling and stratified random sampling –equally at 15.90% each.

From the 2nd and 3rd Research Objctives –to look for factors and essential programs that affect stress and coping of stress, it was found that the 4 groups of factors affecting stress and coping were: 1) Bio-social and personal factors, 2) Psychological factors, 3) Social factors, and 4) Intervention programs to reduce stress. When considering the ranges of effect sizes of each, findings showed that: Psychological factors influenced stress most at effect size of 0.2637 to 1.6450; followed by Intervention programs to reduce stress, with effect size of 0.0020 to 1.4784. Social factors influenced stress with effect size of 0.2118 to 0.9725, and Bio-social and personal factors had effect size of 0.1609 to 1.0559. All of which were

consistent with the view of Suyarin, Sittiwong (2001: 13-14), who stated that stress is a feeling of suffering in the individual – a Psychological or internal trait. Yavaprabhas, Supachai (1990) and Kasemsan, Supanee (2004: 30-31) stated that the cause of stress emerges from a person's thinking and situational evaluation. We can observe that a person who is optimistic, has a sense of humor and calm, has less stress than a person who is pessimistic, serious, and impatience. This may include a person's original personality that feels one has someone to help in problem –e.g spouse, parents, relatives, trusted friends, who will have less stress than a person who is alone. Also, stress is not a result from any single cause, but often from both causes simultaneously; that is, a social problem or situation as an actuator, and thinking –an internal factor. Tragoolsrid, Varaporn (2002: 117-118) stated that the cause of stress are from 2 major sources: self –intelligence, life experience, personality; aggressive, introvert, antisocial, and narcissistic, repression, feeling of loss, feeling of guilt, handicap, physical pain and internal and external –interrelation problems, e.g. career, economic and social, changes in life, responsibilities, and job positions, etc.   Similarly, Henry (2005: 341-356) using the Hopeless theory in the study as critical psychological traits to explain stress in life, by in-depth interviews of labor managers and labor workers, found that the labor workers were more pessimistic than labor managers, resulting from working conditions that create hopelessness in the workplace as well as a stress-full situation -e.g. rapid change in the workplace practices, and job stress. So the executive should consider about the risk of labor workers working in working conditions of hopelessness –e.g. in a rapidly changing and unpredictable situations, in order for them to work effectively and productively.

Peterson and Wilson (2004: 91-113) study of work-stress in the United States showed that results were coherent with hypothesis on culture, value, beliefs, and internal and external locus of control which were key indices of stress.

In considering 25 variables of Psychological traits factors that influenced stress, the variable with highest influence was anxiety, with effect size of 1.6405; followed by mental health, self-concept, self-esteem, and morals/ethics, with effect size of 1.0819, 0.9758, 0.8396, and 0.8376 respectively. This was in line with a study by Sudsabye, Julakatuppa (1991: 11) which stated that when each individual face the same problem, each person's response may be different. The critical factor is how well the individual's personality can deal with the problem: a nervous person will be more likely to experience more stress. That is consistent with study result by Chaijundee, Watcharee (1998: 117) that emotional stability personality had an inverse relationship with overall stress in practical teaching of nursing college supervisors –at .05 level of statistical significance, and Kanchana, Chitprasert (2004: 93-98) whose study on operational problems, strong personality, self-esteem, and stress of 224 newly-graduated nurses in Siriraj Hospital found that newly-graduated nurses with strong personality had less stress than those with weak personality –at .05 level of statistical significance.

As to factors that influence coping of stress, synthesis results found that psychological traits factors influenced coping of stress most at effect size of 0.1201 to 1.0208; the variable with the highest influence was Expectation. Second was Social factors, with influence on coping of stress at effect size of 0.1635 to 0.7144; the variable with the highest influence was workplace support. Bio-social and personal factors influence coping of stress at effect size of 0.1214 to 0.3551; the variable with the highest influence was location of residence. Which was corresponding to a study by Moss and Billings (Phongpachamnanvech, 1992: ref. Moss and Billings, 1982: 212-230) which emphasized that opinion is a critical factor in choosing

methods to cope with a problem, and choice of problem coping method depends more on a person's internal factors than on external environment. Factors affecting choice of coping methods were: values, instincts, emotion, personality, age, belief, and prior success with those methods of coping. Grossen and Bush (Okkitiwat, 2003: ref. Grossen and Bush, 1979: 51-56) which used emotional and physical responses as criteria of successes in coping with stress. Factors that affected those responsed were: sex, age, religion, ethics or culture, education level, occupation, interpersonal relation, and health conditions.

Regarding social factors: workplace support, Pongumpai, Tida (2004: 81-82) had studied and found that nursing personnel with higher social support had less stress. This can be explained that nursing personnel who received attention, encouragement, acceptance, support on knowledge, infomation, finance, tools; including work-facilitative environments e.g. interdependence, trust, and assistance; all of these would help persons adjust behaviors to relieve the existing stress rapidly. The Residence location factor is consistent with a study result by Boonliam, Varin (2000: 76) that Residence environment is correlated with stress and coping at .05 level of statistical significance. Findings showed that residence of rented houses were restricted, old, decayed, noisy surroundings, foul-smelling garbages, poor water and air ventilation all affect the minds of residents. Moreover, when a person already stressed from work returns to his residence to find such undesirable condiions, more stress occurred. Factors that have influence on effective stress-coping obtained from this synthesis can be summarized with similar conclusions to studies by Chaiyotha, Ratchada (2000: 74) and Okkitiwat, Chatkamol (2003: 69-71) as follows:- 1) Bio-social factors; e.g. marital status, education, age, sex, health condition, religion, etc., 2) Past experiences help a person learn from stress and problems, can cope and decide on methods to deal with problems better, success in using methods of stress-coping, 3) ability to deal with differrent problem situation as to what degree they perceived, 4) a person with good adaptation/adjustment, morale, mental health, 5) Strength, can cope well with problems, 6) Sources of benefits from existing environment of the current situation, e.g. health condition, optimism, diligence, logical thinking, good social skills, social support, resources, budgets, tools.

Recommendation

Recommendations on using research results

1. From the preliminary compilation of research, it was found that the level of research studies were mostly dissertations at Masters' degrees level; very few were research studies by full-time faculty/academics. And there is a trend of incrasing interest in study of stress and coping with stress, taking into account the fact that 384 out of 490 research synthesized, or 78.37%, were studied during the last 10 years. Therefore, faculty or academics should place emphasis on in-depth research studies concerning stress and coping with stress in their own work establishments or society, in order to effect prevention and solution to decrease stress level of Thai people in real-life environments, not only as research for study.

2. From the synthesis, it was found –from reports on stress levels of Thai people, that the majority, 55.41%, are at moderate level; only a few showed low level of stress. On coping of Thai people, not many are at high to very high levels. Therefore, stress situation of Thai people should be monitored carefully. Concerned institutions, especially top-executives, government agencies, and family institution should pay attention. Stess

prevention or relief campaign should be initiated to reduce stress level in Thai people, because stress is a fundamental emotion that affect life, family, and social problems, as well as other nation's problems.

3. From synthesis by Meta-analysis, it was found that Psychological factors influenced stress most with effect size of 0.2637 to 1.6450. The variable with highest influence was anxiety, followed by mental health, self-concept, self-esteem, and morals/ethics. Thus, those concerned should find ways to develop these psychological traits to reduce stress. As regards stress-coping, psychological traits factors also influenced coping the most at effect size of 0.1201 to 1.0208. The variable with the highest influence was Expectation, second was emotional intelligence, endurance, self acceptance, happiness, respectively. Hence, to develop capabilities or behaviors to cope with stress, one should find ways to develop these psychological traits to deal with appropriate coping in Thai people.

4. Social factors influenced stress second to Psychological factors, with effect size of 0.2118 to 0.9725. Educational reform was the variable of highest influence, followed by parents'expectations, quality of education, work obligations/responsibilities, community of residence and involvement. Thus, those concerned or educational institutions should place importance on impacts of educational reforms, which was found to affect stress of children, teachers, and parents very much; ways should be found on relaxing stress that accompanies curriculum or tasks resulting from educational reforms. Also, parents should received persuasion or encouragement to create understanding and awareness of parents' expectations that are inappropriate, which may cause high stress and subsequent problems in children; as witnessed by news of increased suicides of students who were unable to cope with family's pressure and competitive trends in education. As for social factors that influence stress-coping, the variable with the highest influence was workplace support, followed by work involvement, family relationship, coworkers' support, and family's support, respectively. Therefore, if the workplace establishment has an atmosphere that facilitate a high level of social support for employees and operators at work, an appropriate coping of stress by employess can be obtained, e.g. person/source of advice, fully-equiped tools, sufficient information for work, caring superiors/coworkers, etc.

5. Intervention programs to reduce stress that have highest influence on stress was self-control practice. Followed by assistance program, psychoeducation group, counselling, small-group instructions, and muscle-relaxation practice. Thus, those that desire to solve stress problem for individual should apply these programs on stress-reducing activities.

Recommendations on subsequent research

1. From the objectives and designs of research papers synthesized, as many as 80% of those were correlation studies. Very few were experimental studies, and development studies. For this reason, subsequent research should study to effect development of behaviors to deal with stress or relax stress which represent integration of methods in consonant with each person's lifestyle or spirit.

2. Stress questionnaires have been developed and have high levels of reliability, and applicable to studies of all age groups and professions. There is thus no need to construct new Stress questionnaires in subsequent research. On the other hand, the existing Stress-Coping questionnaires have moderate levels of reliability, and had been developed in accordance with Western concepts, e.g. Lazarus & Folkman (1984), Jalowiec (1988),

Mccubbin (1988), which may not by consistent with lifestyles of Thai people who are by and large Buddhists. Thus, in the study of research instruments or stress-coping behaviors, Stress-Coping questionnaires should be constructed in line with Buddhism, which mostly emphasizes solving problems from inside or mind of individual, rather than finding external solutions. In addition, more Buddhism-oriented, or eastern theoretical concepts should be introduced as research foundation.

3. Research studies are limited to a one-way, causal type study. Studies of correlation between multiple variables or studies on both causes and effects of stress and coping simultaneously are very few in number. Therefore, further study may be done to find a complete answer of causes and effects.

4. Samples of research studied were mostly study of same type of sample group, i.e. government officials. For subsequent studies, it is recommended that the samples be in the private-sector, or in professions that have high impact on society, e.g. mass-media, celebrity, artist, etc.; or of professions that are society's leaders or models, e.g. clerics, judges, politicians, Top-executives, business persons, etc.

5. Self-control practice programs, assistance programs, psychoeducation group, counselling, and muscle-relaxation practice are intervention programs that highly affect stress-reduction. In subsequent studies, these activities should also be included in stress-reduction programs. For intervention programs to develop coping with stress, they should include cartoon-pictured information program, life-skills development, Thai massage, group-counselling to develop stress-coping in sample groups.

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